

Application No. 10/717,295

**REMARKS**

Claims 1 to 38 are pending in the application. Claims 2 to 24 have been objected to as being of improper dependent form. Claims 1 to 38 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 49 of Copending Application No. 10/322,110, claims 1 to 22 of Copending Application No. 10/040,850, and claims 10 to 13, 16 to 27, 30, 31, 33 to 41, 44, 45, and 47 to 71 of Copending Application No. 10/036,469.

With respect to the objection to claims 2 to 24 as being of Improper dependent form, the Examiner has stated that these claims fail further to limit the subject matter of a previous claim in that these claims depend on an independent claim 1 but that there is no presentation of a claim 1.

Applicants respectfully traverse this ground for objection and request reconsideration and withdrawal thereof. Claim 1 appears on page 125 of the instant application. As indicated in PAIR, a copy of the document description therefrom of which is attached hereto, the instant application was apparently scanned in incorrectly by the USPTO. The instant application has a specification with 124 pages, and the claims begin on page 125, with claim 1. Claim 2 begins on page 137. PAIR incorrectly indicates that the specification has 136 pages instead of 124 pages. It appears that when the instant application was scanned into the system, claim 1 was inadvertently incorporated into the specification instead of into the claims. Accordingly, Applicants point

Application No. 10/717,295

out that claim 1 was presented in the present application as filed, and that claims 2 to 24 are of proper dependent form.

Regarding the provisional obviousness-type double patenting rejections, the Examiner has stated that although the conflicting claims are not identical, they are not patentably distinct from each other because the reaction of the base polymer, which is prepared from monomers as claimed, with ester salts as claimed would have been obvious to one of ordinary skill in the art in view of the functional groups on the base polymer.

Applicants respectfully traverse these provisional rejections and request reconsideration and withdrawal thereof. The present invention is directed to polymers having thereon saturated ester groups, unsaturated ester groups, and, optionally, haloalkyl groups, wherein the ratio of the saturated ester groups to unsaturated ester groups to haloalkyl groups is maintained within a specified ratio.

This result is obtained by another embodiment of the present invention, a process for making said polymer. In one specific embodiment, as recited in claim 36, the unsaturated ester is present in a molar excess amount. In another specific embodiment, as recited in claim 28, the unsaturated ester salt is added first and the saturated ester salt is added second.

The polymers of the present invention have substantially reduced halogen content, as indicated by the value of  $px$  being from 0 to about 50. In specific embodiments, this value is even lower, as in claims 23 and 37 ( $px$  is no more than about 10), claims 24 and 38 ( $px$  is no more than about 5), claims 39 and 43 ( $px$  is no more than about 2).

Application No. 10/717,295

claims 40 and 44 ( $\rho\chi$  is no more than about 1), claims 41 and 45 ( $\rho\chi$  is no more than about 0.1), and claims 42 and 46 ( $\rho\chi$  is 0).

This low halogen content enables advantages such as a desirably low crosslink density in the polymer when it is subsequently crosslinked, synthesis of the photopatternable polymer within a reasonably short period of time, reduced corrosion caused by placement of the photopatternable polymer in unprotected parts of a microelectronic device, reduced corrosion caused by the photopatternable polymer when using unprotected equipment during the fabrication and processing of microelectronic devices, and reduction of unnecessary exposure of workers to residual hazardous chemicals such as chlorine gas.


The Examiner has not pointed to anything in the teachings of the copending applications that would teach or suggest to one of ordinary skill in the art methods for obtaining polymers having these reduced halogen contents. Accordingly, Applicants are of the position that the present invention is patentable with respect to the cited references.

Applicants believe that the foregoing amendments and distinctions place the claims in condition for allowance, and accordingly respectfully request reconsideration and withdrawal of all grounds for rejection.

Application No. 10/717,295

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Applicant(s) attorney, Judith L. Byorick, at Telephone Number (585) 423-4564, Rochester, New York.

Respectfully submitted,

  
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